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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/756,282	01/09/2001	Masayasu Asano	ASA-954	6257

24956 7590 06/18/2004		EXAMINER
MATTINGLY, STANGER & MALUR, P.C. 1800 DIAGONAL ROAD SUITE 370 ALEXANDRIA, VA 22314		BANANKHAH, MAJID A

ART UNIT	PAPER NUMBER
2127	

DATE MAILED: 06/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/756,282	ASANO ET AL.
	Examiner	Art Unit
	Majid A Banankhah	2127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>09 January 2001</u>.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-9</u> is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-9</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☒ All   b)☐ Some * c)☐ None of:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>01/09/01</u>.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to application filed on January 09, 2001. Claims 1-9 are

considered for examination.

Claim Rejections - 35 USC § 103

2. Following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3. Claim 1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zalewski et al. (U.S.
Pat. No. 6,647,508, hereinafter Zalewski) and Kurauchi et al. (U.S. Pat. No. 6,704,489,
hereinafter Kurauchi).

Per claims 1, and 2 Zalewski teaches a computer system comprising:

means for operating a plurality of operating systems on one computer and allocating computer

resources to the operating systems (Zalewski, col. 1, lines 16-21, Fig. 1, 108, 110, 112, 114, and

118 and 120, and col. 4, lines 36-47, Resources, such as CPUs and memory, can be dynamically

assigned to different partitions and used by instances of operating systems running within the

machine by modifying the configuration. The partitions themselves can also be changed without

rebooting the system by modifying the configuration tree);

means for managing the computer resources (col. 4, lines 36-47);

Zalewski does not teach of a means for updating allocation of the computer resources to the operating systems and restoring the allocation thereof. However, Kurauchi et al. teach of a resource management system wherein the resource management is comprised of a plurality of programs. The resource manage perform various kinds of control operation including updating of the application resource and restoring the allocation of the resources (col. 23, lines 21-36, Following the updating of the resource management DB 2020, the resource manager 2010 restores the current volume in the key information related to the client 2100b) for the reason that the application program can acquire necessary resource with authorization and consequently efficiency in resource usage is increased. Therefore, it would have been obvious for one ordinary skill in the art at the time the invention was made to use Kurauchi's resource management system in Zalewski's multiple operation system for the reason that the operating systems can acquire necessary resource with authorization and consequently efficiency in resource usage is increased.

The reference of Kurauchi further teaches of means for managing contents respectively of the update of the computer resource allocation and the restoration of the computer resource allocation in relation to a state of operation of each of the operating systems (col. 13, lines 4-19, the resource manager 2010 comprehends the capacity for each resource type and the state of each resource as to whether it is used or not, by referring to and updating the resource management DB 2020); and

means for updating the computer resource allocation and restoring the computer resource allocation according to a state of operation of each of the operating systems (col. 15, lines 4-19, following the updating of the resource management DB 2020, the resource manager 2010

<u>restores</u> the current volume in the key information related to the client 2100b, whose data transfer bandwidth has been reduced).

Per claim 2, the claim is rejected for the reasons stated in the rejection of claim 1, and further, since the assignment of the resource is based on the use, when an operating system fails a bigger portion of the resource is allocated to the new active (standby) operating system, for the reason that, the failed operating system has no use for the resource, see, how Kurauchi calculate the resource in col. 18, lines 45-58.

Per claim 5, the limitation of the operation time to execute each processor is taught by Kurauchi in col. 15, lines 4-19 (valid time period, or authorization period).

4. Claims 3-4, and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zalewski et al. (U.S. Pat. No. 6,647,508, hereinafter Zalewski) and Kurauchi et al. (U.S. Pat. No. 6,704,489, hereinafter Kurauchi) and Wolf (U.S. Pat. No. 6,044,367, hereinafter Wolf).

Per claims 3-4, a method of controlling a computer system in which a plurality of operating systems are operating on one computer (Zalewski, col. 1, lines 16-21, Fig. 1, 108, 110, 112, 114, and 118 and 120, and col. 4, lines 36-47, <u>Resources,</u> such as CPUs and memory, can be dynamically assigned to different partitions and used by instances of <u>operating systems</u> running within the machine by modifying the configuration. The partitions themselves can also be changed without rebooting the system by modifying the configuration tree).

Zalewski does not teach of a means for monitoring load on each of the operating system by monitoring a state of operation of the operating system; analyzing the load and determining a

cause of a highest load on one of the operating systems. However, Wolf et al. teach of a

monitoring and load balancing system in a client server environment wherein the load balancing

is accomplished based on utilization of the servers for the purpose of balancing the load in such a

way that the system with highest load get a bigger portion of the resource (Wolf, col. 47, lines 60

to col. 48, line 23). Therefore, it would have been obvious for one ordinary skill in the art at the

time the invention was made to use Wolf's load balancing system in Zalewski's multiple

operation system for the reason that the operating systems with highest load get a bigger portion

of the resource.

Per claims 6, the use ratio is explained in Kurauchi in col. 18, lines 45-58.

Per claim 7, the limitation of managing a use time of each of the user; and

computer resource updating allocation of computer resources in response to a request from the

user; allocating computer resources set by the user; and charging according to a state of the

computer resource allocation is taught by Kurauchi in col. 18 line 45 to col. 19, line 6.

5. Claim 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zalewski et al. (U.S.
Pat. No. 6,647,508, hereinafter Zalewski) and Miller et al. (U.S. Pat. No. 5,168,547, hereinafter
Miller).

Per claim 8, a method of controlling a computer system in which a plurality of operating systems

are operating on one computer (Zalewski, col. 1, lines 16-21, Fig. 1, 108, 110, 112, 114, and 118

and 120, and col. 4, lines 36-47, Resources, such as CPUs and memory, can be dynamically

assigned to different partitions and used by instances of operating systems running within the

machine by modifying the configuration. The partitions themselves can also be changed without rebooting the system by modifying the configuration tree).

Zalewski does not teach of reserving a shared main memory area shared among the operating systems; and writing data in a format for communication in the main memory area and reading the data from the main memory area, thereby forming a virtual communication medium between the operating systems. However, Miller teaches of distributed architecture wherein the main shared memory is used for read and write in order for the processors be able to directly exchange data (See, Miller, col. 7, lines 41). Therefore, it would have been obvious for one ordinary skill in the art at the time the invention was made to use Miller's main shared memory system in Zalewski's multiple operation system for the reason that the processors be able to directly exchange data.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 9 is rejected under 35 U.S.C. 102(e) as being anticipated by Noel et al. (U.S. Pat. No. 6,381,682, hereinafter Noel).

Per claim 9, a method of controlling a computer system in which a plurality of operating systems are operating on one computer (col. 5, line 66 to col. 6, line 15, multi-processor system capable of being partitioned to allow the concurrent execution of multiple instances of operating system software):

operating the operating systems independent of each other (col. 7, lines 12-19, The execution

environment for a single copy of an operating system, such as copy 208 is called a "partition"

202, and the executing operating system 208 in partition 202 is called "instance" 208. Each

operating system instance is capable of booting and running independently of all other operating

system instances in the computer system, and can cooperatively take part in sharing resources

between operating system instances as described below); and monitoring operation of each of the

operating systems by use of a resource shared among the operating systems (col. 4, lines 29-40,

In accordance with the principles of the present invention, multiple instances of operating

systems execute cooperatively in a single multiprocessor computer wherein all processors and

resources are electrically connected together. The single physical machine with multiple physical

processors and resources is adaptively subdivided by software into multiple partitions, each with

the ability to run a distinct copy, or instance, of an operating system. Each of the partitions has

access to its own physical resources plus resources designated as shared. In accordance with one

embodiment, the partitioning of resources is performed by assigning resources within a

configuration).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner
should be directed to **Majid A. Banankhah** whose voice telephone number is **(703) 308-6903**. A
voice mail service is also available at this number.

All response sent to U.S. Mail should be mailed to:

Commissioner of Patent and Trademarks

Washington, D.C. 20231
      Hand-delivered responses should be brought to Crystal Park Two, 2021 Crystal Drive, Arlington. VA, Sixth Floor (Receptionist). All hand-delivered responses will be handled and entered by the docketing personnel. Please do not hand deliver responses to the Examiner.
      All Formal or Official Faxes must be signed and sent to either (703) 308-9051 or (703) 308-9052. Official faxes will be handled and entered by the docketing personnel. The date of entry will correspond to the actual FAX reception date unless that date is a Saturday, Sunday, or a Federal Holiday within the District of Columbia, in which case the official date of receipt will be the next business day. The application file will be promptly forwarded to the Examiner unless the application file must be sent to another area of the office, e.g., Finance Division for fee charging, etc.
      Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is **(703) 305-9600**.

Majid Banankhah

6/14/04

MAJID BANANKHAH
PRIMARY EXAMINER